

Current Listing of Claims

1. (Currently Amended) A bi-phasic or multiphasic formulation comprising an ~~aptamer, ribozyme, peptide nucleic acid, or antisense~~ oligonucleotide ~~or bioequivalent thereof~~ having one or more phosphorothioate linkages, and a water-soluble anti-oxidant capable of inhibiting desulfurization of said oligonucleotide.
2. (Currently Amended) The formulation of claim 1, wherein said oligonucleotide ~~or bioequivalent thereof~~ comprises one or more base modifications.
3. (Currently Amended) The formulation of claim 1 wherein said oligonucleotide ~~or bioequivalent thereof~~ comprises one or more modified internucleoside linkages in addition to said one or more phosphorothioate linkages.
4. (Currently Amended) The formulation of claim 1, wherein said oligonucleotide ~~or bioequivalent thereof~~ comprises one or more sugar modifications.
5. (Original) The formulation of claim 4, wherein said sugar modification is a 2'-methoxyethoxy modification.
6. (Previously Presented) The formulation of claim 1, wherein said antioxidant is cysteine, glutathione, α -lipoic acid, a 2-mercapto-5-benzimidazole salt or a 2-mercaptoethanesulfonic acid salt.
7. (Currently Amended) The formulation of claim 1, wherein said oligonucleotide is a ribozyme, an aptamer or an antisense oligonucleotide.

8. (Currently Amended) A method of preventing desulfurization of an ~~aptamer, ribozyme, peptide nucleic acid, or antisense oligonucleotide or bioequivalent thereof~~ comprising combining ~~an~~ the oligonucleotide having one or more phosphorothioate linkages with a water-soluble antioxidant in a bi-phasic or multi-phasic formulation.

9. (Currently Amended) The method of claim 8, wherein said oligonucleotide ~~or bioequivalent thereof~~ comprises one or more base modifications.

10. (Currently Amended) The method of claim 8, wherein said oligonucleotide ~~or bioequivalent thereof~~ comprises one or more modified internucleoside linkages in addition to said one or more phosphorothioate linkages.

11. (Currently Amended) The method of claim 8, wherein said oligonucleotide ~~or bioequivalent thereof~~ comprises one or more sugar modifications.

12. (Original) The method of claim 11, wherein said sugar modification is a 2'-methoxyethoxy.

13. (Previously Presented) The method of claim 8, wherein said antioxidant is cysteine, glutathione, α -lipoic acid, a 2-mercapto-5-benzimidazole salt or a 2-mercaptoethanesulfonic acid salt.

14. (Currently Amended) The method of claim 8, wherein said oligonucleotide is a ribozyme, an aptamer or an antisense oligonucleotide.